



RADIOBLOCKS

in period two and beyond

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From science questions...

Open questions and science areas where radio astronomy can provide unique answers:

- Nature of Dark Matter and Dark Energy
- Early universe supermassive Black holes
- Formation of relativistic jets
- Physics of Gravitational waves
- Transient universe
- Milky Way morphology
- Star Formation



...to technical developments

Broad-band antennas/receivers
Higher recording bit-rate
Next generation correlators
Wider frequency coverage
Wider field of view



RFI: resilience & mitigation
Larger **bandwidth**
FP Arrays
Early **digitisation**
Correlation, transport & analysis

VLBI20-30: a scientific roadmap for the next decade

The future of the European VLBI Network

Editors: Tiziana Venturi, Zolt Paragi & Michael Lindqvist



Endorsed by the EVN Consortium Board of Directors





This meeting

- The project:
 - What has RB delivered so far?
 - What is the outlook for the end of the project?
 - Risks and mitigations
- Talk from external stakeholder
 - AI as a Detector: Real Time AI Technosignature Search by Adam Thompson
- RadioNet and the next INFRA-TECH call
 - How to leverage on Radioblocks results and collaboration?

Participants

Executive Team

WP leaders will tell us about the RB results and outlook

General Assembly

The project Board will meet in the afternoon

RadioNet

Radioblocks and radio astronomy coordination in Europe

External Industrial advisory board

An outside view on the project and how to involve industry in EC projects



Industrial partnerships

RADIOBLOCKS actively engages with industry to co-develop advanced technologies for the entire signal chain, fostering a mutually beneficial ecosystem beyond radio astronomy.

Technology transfer areas:

- **Telecommunications:** Advanced antenna technologies, high-speed data processing, and signal processing methods can be directly applied to the telecommunications industry
- **Aerospace:** High-reliability components and advanced data processing techniques are relevant to the aerospace sectors
- **High-Performance Computing:** GPU-based processing and high-speed data transport are valuable to other scientific fields and commercial high-performance computing applications
- **AI/ML Applications:** Expertise in AI/ML for signal processing can be leveraged across various sectors

Industries in Radioblocks:

- TTI-Norte
- Lytid
- Sioux Technology

External industries working with Radioblocks

- DIRAMICS

External Industrial Advisory Board:

- Andrey Baryshev (RUG, Radioblocks representative)
- André Bos (S[&]T)
- Erik Kentie (SURF)
- Miroslav Pantaleev (Beyond Gravity)
- Ron Schram (Neways)
- Adam Thompson (NVIDIA)



Outlook after Radioblocks

- **How does the consortium want to proceed?** This is a key opportunity to build on our success and long lasting collaborations. How to propose a follow-up project to continue these developments?
- **Upcoming EC INFRA-TECH Call:** A new Horizon Europe funding call for research infrastructure technology will be released soon

Let's investigate future options for the collaboration

*****session in the afternoon*****